#### ENDURING RESOURCES, LLC

425 Seventeenth Street, Suite 1500 Denver, Colorado 80202 Telephone: 303-573-1222

Facsimile: 303-573-0461

November 15, 2005

State of Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210 P.O. Box 145801 Salt lake City, Utah 84114-5801

Attention:

Diana Whitney

RE:

Big Pack 12-21-11-2

**Application for Permit to Drill** 

Dear Ms. Whitney

Attached are two original applications to drill for the above-referenced proposed well. This well will be drilled on federal lands.

Enduring Resources, LLC respectfully requests that this information, and future information, be held confidential.

Should you have any questions concerning this matter, please do not hesitate to call (303-350-5114)

Very truly yours

**ENDURING RESOURCES, LLC** 

Alvin R. (AI) Arlian

Landman – Regulatory Specialist

ara/

Attachments as stated:

cc:

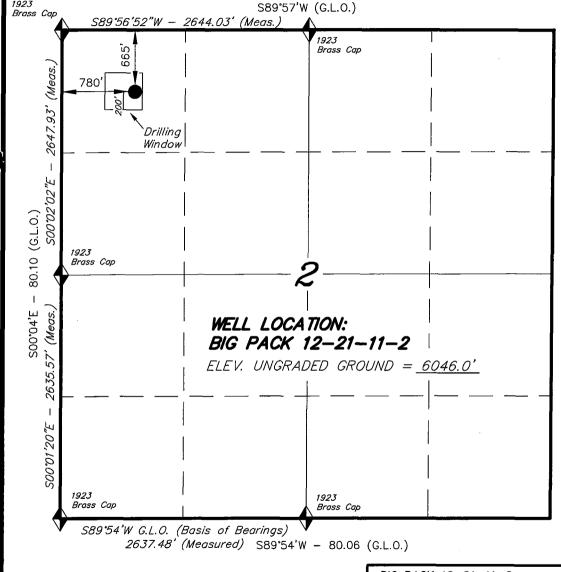
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DIV. OF OIL, GAS & MINING

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DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT (highlight changes)	
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	APPLICATION FOR PERMIT TO DRILL ην							5. MINERAL LEASE N UZU-47084	0:	6. SURFACE: State	
1A. TYPE OF WO	DRK: C	RILL 🔽 F	REENTER [	DEE	PEN				7. IF INDIAN, ALLOTT	EE OR TI	RIBE NAME:
B. TYPE OF WE	ill: OIL 🗌	GAS 🗹 C	THER		SIN	GLE ZONE	MULTIPLE ZON	ΕΠ	8. UNIT or CA AGREE	MENT NA	AME:
2. NAME OF OPE Enduring F	Resources,	LLC							9. WELL NAME and N Big Pack 12-		-2
3. ADDRESS OF 475 17th S		) <sub>CITY</sub> Denve	r	TE CO	ZIP 802	220	PHONE NUMBER: (303) 350-5114		10. FIELD AND POOL, Undesignated		DCAT:
4. LOCATION OF	WELL (FOOTAG	ES)	518	16	2000	2024		1h	11. QTR/QTR, SECTION MERIDIAN:		NSHIP, RANGE,
AT SURFACE:	780' FWL	- 665' FNL	(NV	VNW)	, 24	1237		۵,	NWNW 2		21E S
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14. DISTANCE IN	MILES AND DIRI	ECTION FROM NEAR	EST TOWN OR PO	ST OFFICE:				-	12. COUNTY:	Т	13. STATE:
		erly from Oura	•						Uintah		UTAH
	O NEAREST PRO	PERTY OR LEASE LI	NE (FEET)	16. NU	MBER OF	ACRES IN LEA	SE:	17. N	UMBER OF ACRES ASS	IGNED T	O THIS WELL:
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APPLIED FOI 1,600' +	R) ON THIS LEAS	L (DRILLING, COMPL E (FEET)	EIED, OR	19. PR	OPOSED	DEPTH:	0.075	l	OND DESCRIPTION:		
	(SHOW WHETH	ER DF, RT, GR, ETC.)	:	22. API	PROXIMA	TE DATE WOR	8,275		_B0008031		
6058' KB		,			5/200		·········	ł	days		
					-						
24.			PROPOS	ED CASI	NG AI	ND CEMEN	ITING PROGRAM				
SIZE OF HOLE		, GRADE, AND WEIGH	HT PER FOOT	SETTING D			CEMENT TYPE, QU	ANTITY,	YIELD, AND SLURRY V	VEIGHT	
20"	14"	line pipe			40	3 yards		Read	ly Mix		
11"	8-5/8"	J-55	24#	2	2,000	Premium	Lead	13	8 sxs	3.50	11.1
-						Premium	Tail	13	88 sxs	1.15	15.8
7-7/8"	4-1/2"	N-80	11.6#	7	7,241	Class G		12	28 sxs	3.3	11.0
						50/50 Po	z Class G	93	0 sxs	1.56	14.3
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<b>✓</b> WELL PI	AT OR MAP PRE	PARED BY LICENSED	SURVEYOR OR E	NGINEER		<b>☑</b> cc	OMPLETE DRILLING PLAN				
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						<u> </u>					_
NAME (PLEASE	PRINT) Alvin	R. (Al) Arlian				TITL	E Landman - Re	gulat	ory Specialist		
SIGNATURE		71/1				DAT	11/15/2005				
(This space for Sta	ate use only)										
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API NUMBER AS	SIGNED:	43-047-3-	7403		UII,	Gas and	Mining (				
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						_	1 // /	<b>~</b> 1₹,	OF OIL, GAS &	MININ	G



♦ = SECTION CORNERS LOCATED

BASIS OF ELEV; U.S.G.S. 7-1/2 min QUAD (BIG PACK MTN. SE)

BIG PACK 12-21-11-2 (Surface Location) NAD 83 LATITUDE = 39° 48' 29.14" LONGITUDE = 109° 32' 29.01" (C.L.O.)

S00.01'W

#### ENDURING RESOURCES

WELL LOCATION, BIG PACK 12-21-11-2, LOCATED AS SHOWN IN THE NW 1/4 NW 1/4 OF SECTION 2, T12S, R21E, S.L.B.&M. UINTAH COUNTY, UTAH.

THIS IS TO CERTIFY THAT THE ABOVE PER WAS PREPARED FROM FIELD OF ACTURE SURVEYS MADE BY ME OR UNDER AND SURVEYS OF ACTURE SUPERVISION OF THAT THE SAME ARE TRUE AND SURRECT TO THE BEST OF MY KNOWLEDGE AND FELIEF.No.189377

REGISTERS D LAND REGISTRA PON NO. STATE OF BLAND

#### TRI STATE LAND SURVEYING & CONSULTING

180 NORTH VERNAL AVE. - VERNAL, UTAH 84078 (435) 781-2501

SHEET

OF 9

DATE DRAWN: 8-30-05	SURVEYED BY: C.M.		
REVISED:	DRAWN BY: F.T.M.		
NOTES:	SCALE: 1" = 1000'		

#### Enduring Resources, LLC Big Pack #12-21-11-2 NWNW Sec 2 T12S-R21E Uintah County, Utah Lease #: ML-47084

#### ONSHORE ORDER 1 - DRILLING PLAN

#### 1. <u>Estimated Tops of Geological Markers:</u>

Formation	Depth (K.B.)
Uinta	Surface
Green River	513'
Wasatch	3578'
Mesaverde	5934'
Castlegate	8288'

# 2. <u>Estimated Depths of Anticipated Water, Oil, Gas or Other Minerals: (6058.3' estimated KB)</u>

Substance	Formation	Depth (K.B.)
	KB-Uinta Elevation: 6058'	
Oil / Gas	Green River	513'
Oil /Gas	Wasatch	3578'
Oil /Gas	Mesaverde	5934'
	Castlegate	8288'
	Estimated TD	8275'

## 3. Pressure Control Equipment: (3000 psi schematic attached)

- A. Type: Eleven (11) inch double gate hydraulic BOP with eleven (11) inch annular preventer on 3,000 psi casinghead, with 3,000 psi choke manifold equipped per the attached diagram. BOPE as specified in *Onshore Oil & Gas Order Number 2*. A PVT, stroke counter and flow sensor will be installed to check for flow and monitor pit volume.
- B. Pressure Rating: 3,000 psi BOPE
- C. Kelly will be equipped with upper and lower Kelly valves.
- D. Testing Procedure: <u>Annular Preventer</u>

At a minimum, the annular preventer will be pressure tested to 50% of the stack rated working pressure for a period of ten (10) minutes or until provisions of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

- 1. When the annular preventer is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition to the above, the annular preventer will be functionally operated at least weekly.

#### **Blow-Out Preventer**

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the BOP stack (if isolated from the surface casing by a test plug) or to 70% of the internal yield strength of the surface casing (if the BOP is not isolated from the casing by a test plug). Pressure will be maintained for a period of at least ten (10) minutes or until the requirements of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

- 1. When the BOP is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition to the above, the pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills and tests will be recorded in the IADC driller's log.

#### E. Miscellaneous Information:

The blowout preventer and related pressure control equipment will be installed, tested and maintained in compliance with the specifications in and requirements of *Onshore Oil & Gas Order Number 2*.

Single Shot directional surveys will be dropped every 2000 feet. Maximum allowable angle is 5 degrees.

#### 4. **Proposed Casing & Cementing Program:**

## A. Casing Program: All New

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Depth Set (MD)
20"	14" O.D.				40' (GL)
11"	8-5/8"	24#	J-55	ST&C	0 – 2,016' (KB) est.
7-7/8"	4-1/2"	11.6#	N-80	LT&C	0 – 8,275' (KB)

The surface casing will have guide shoe, 1 joint, insert float collar. Centralize the shoe joint with bowspring centralizers in the middle and top of the joint and the next16 joints with bowspring centralizers on every other collar (8 centralizers total). Thread lock guide shoe.

Casing string(s) will be pressure tested to 0.22 psi/foot of casing string length or 1500 psi, whichever is greater (not to exceed 70% of the internal yield strength of the casing), after cementing and prior to drilling out from under the casing shoe.

#### **B.** Casing Design Parameters:

Depth (MD)	Casing	Collapse(psi)/SF	Burst (psi)/SF	Tension(mlbs)/SF
40' (GL)	14" OD	- Odiiapse(psi)/Oi	Durst (psi)/Oi	Tension(minos)/SF
2016' (KB)	8-5/8", 24#/ft, J55, STC	1370/1.52(a)	2950/3.28(b)	244/5.81(c)
8275' (KB)	4-1/2", 11.6#/ft, N-80, LTC	6350/1.48 (d)	7780/1.97 (e)	223/2.70 (f)

- (a.) based on full evacuation of pipe with 8.6 ppg fluid on annulus
- (b.) based on 8.6 ppg gradient with no fluid on annulus
- (c.) based on casing string weight in 8.6 ppg mud
- (d.) based on full evacuation of pipe with 10.0 ppg fluid on annulus
- (e.) based on 9.2 ppg gradient, gas to surface, with no fluid on annulus, no gas gradient
- (f.) based on casing string weight in 9.2 ppg mud

#### PROPOSED CEMENTING PROGRAM

#### Surface Casing (if well will circulate)-Cemented to surface

CASING	SLURRY	FT. of FILL	CEMENT TYPE	sxs	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
8-5/8"	Lead	1516	Premium cement + 16% gel + 0.25 pps celloflake	138	25%	11.1	3.50
8-5/8"	Tail	500	Premium cement + 2% CaC <sub>2</sub> + 0.25 pps celloflake	138	25%	15.8	1.15

A cement top job is required if cement fallback is greater than 10' below ground level. Top job (weight 15.8 ppg, yield 1.15 ft<sup>3</sup>/sx) cement will be premium cement w/ 3% CaCl<sub>2</sub>.+0.25 pps celloflake. Volume as required

## Surface Casing (if well will not circulate) - Cemented to surface

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
8-5/8"	Lead	500	Premium cement + 2% CaCl <sub>2</sub> + 0.25 pps celloflake	138	25	15.8	1.15
8-5/8"	Top job	As req.	Premium cement + 3% CaCl <sub>2</sub> + 0.25 pps celloflake	As Req.		15.8	1.15

#### Production Casing and Liner - Cemented TD to 300' above base of surface casing

CASING	SLURRY	FT.	CEMENT TYPE	SXS	EXCESS	WEIGHT	YIELD
		of			(%)	(ppg)	(ft³/sx)
		FILL				1	
			Class "G" + 5% NaCl				
4-1/2"	Lead	1462	+ 12% Gel + 0.25	128	25	11.0	3.3
			pps celloflake + 0.2%				
	]	ļ	antifoam + 0.25%				
			fluid loss +				
			1% extender				
			50/50 POZ Class G +				
4-1/2"	Tail	5097	2% gel +1% CaCl <sub>2</sub>	930	25	14.3	1.56
		ł	+ 0.2% dispersant				
			+ 0.2% fluid loss				
			+ 0.1% antifoam				

Cement volumes for the 4-1/2" Production Casing will be calculated to provide a top of cement to 300' above base of surface casing. Cement volumes are approximate and were calculated under the assumption that a gauge hole will be achieved. Actual cement volumes may vary due to variations in the actual hole size and will be determined by running a caliper log on the drilled hole. Actual cement types may vary due to hole conditions and cement contractor used.

All waiting on cement (WOC) times will be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

#### 5. <u>Drilling Fluids (mud) Program:</u>

Interval (MD)	Mud Weight	Fluid Loss	Viscosity	Mud Type
0' – 2016' (KB)		No cntrl		Air/mist
2000'-3000' (KB)	8.4-8.6	No cntrl	28-36	Water
3000'-8275' (KB)	8.8-10.2	8 - 10 ml	32-42	Water/Gel

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blowout will be available at the well site during drilling operations.

#### 6. <u>Evaluation Program:</u>

Tests:

No tests are currently planned.

Coring:

No cores are currently planned.

Samples:

No sampling is currently planned.

#### Logging

- Dual Induction SFL /Gamma Ray/Caliper/SP/TDLT/CNL/ML TD to Base Surface Casing
- Cement Bond Log / Gamma Ray:
   TD to Base of Surface Casing or Top of Cement if below Base of Surface Casing

Stimulation: A stimulation or frac treatment will be designed for completion of this well based on openhole log analysis. The drill site, as approved, will be sufficient size to accommodate all completion activities.

#### 7. Abnormal Conditions:

No abnormal temperatures or pressures are anticipated. No  $H_2S$  has been encountered or known to exist from previous wells drilled to similar depths in the general area.

Maximum anticipated bottom hole pressure equals approximately 4,303 psi (calculated at 0.52psi/foot of hole) and maximum anticipated surface pressure equals approximately 2,483 psi (anticipated bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot of hole).

#### 8. Anticipated Starting Dates:

Anticipated Commencement Date-

Within one year of APD issue.

Drilling Days-

Approximately 10 days

Completion Days

Approximately 10 days

• Anticipate location construction within 30 days of permit issue.

#### 9. <u>Variances:</u>

None anticipated

#### 10. Other:

A Cultural Resource Inventory and Paleontology reconnaissance shall be conducted for the well location, access route and pipeline. The reports shall be submitted to the Division of Oil, Gas and Mining and the School and Institutional Trust lands Administration upon their receipt. Enduring Resources, LLC Big Pack #12-21-11-2 NWNW Sec 2 T12S-R21E Uintah County, Utah Lease #: ML-47084

#### **MULTI-POINT SURFACE USE & OPERATIONS PLAN**

#### 1. Existing Roads:

#### Directions to the Big Pack 12-21-11-2 Well Pad

Beginning at the city of Bonanza, Utah. Leave the city of Bonanza heading south on Turkey Trak road for a distance of approximately 9.1 miles to a point where the road forks. Turn left onto Seep Ridge Road and continue heading southwest for a distance of approximately 2.3 miles where there is a turn-off to the left. Do not turn left. Continue heading southerly on Seep Ridge Road for a distance of approximately 12.2 miles (4.2 plus 3.3 plus 4.7, see topographic map A) to a turn-off to the left. Turn left and bear easterly along existing access for approximately 2.9 miles. Turn left and proceed northwest for approximately 2,160' (0.5 miles) along proposed access to the Big Pack 1221-11-2 Well Pad.

The well pad is approximately 28 miles southeast of Ouray, UT.

#### 2. Planned Access Roads:

The proposed access road will be approximately 2,160 feet of new construction (ON-LEASE). No new access road construction or surface disturbance (OFF-LEASE) will be needed. However a road right-of-way is pending at the BLM to use an existing road OFF-LEASE of approximately 2.9 miles. Access to the proposed new access road will be by using existing BLM roads. Please refer to Topo Map "B" for the takeoff point for the new ON-LEASE road construction.

The proposed access road will be utilized to transport personnel, equipment and supplies to and from the proposed well site during drilling, completion and production operations. The road will be utilized year round.

The access road will be crowned 2% to 3%, ditched and constructed with a running surface of 18 feet and a maximum disturbed width of 30 feet right-of-way. Maximum grade of road is 5% or less. Graveling or capping the roadbed will be performed as necessary to provided a well constructed, safe road. No fence crossings, culverts, turnouts, cattle guards or major cuts and fills are required. Prior to construction or upgrading, the proposed road shall be cleared of any snow and allowed to dry completely.

Surface disturbance and vehicular traffic will be limited to the proposed location and proposed access route. Any additional area needed will be approved in advance. All construction shall be in conformance with the standards outlined in the BLM and Forest Service publication: Surface Operating Standards for Oil and Gas Exploration and Development. 1989.

The road surface and shoulders will be kept in a safe usable condition and will be maintained in accordance with the original construction standards. All drainage ditches will be kept clear and free flowing and will be maintained according to original construction standards. The access road surface will be kept free of trash during All traffic will be confined to the approved disturbed surface. operations. drainage crossings shall be designed so they will not cause siltation or accumulation of debris in the drainage crossing nor shall the drainages be blocked by the road bed. Erosion of drainage ditches by runoff water shall be prevented by diverting water off at frequent intervals by means of cutouts. Upgrading shall not be allowed during muddy conditions. Should mud holes develop, they shall be filled in and detours around them avoided. When snow is removed from the road during the winter months, the snow shall be pushed outside of the borrow ditches and the turnouts kept clear so that snowmelt will be channeled away from the road.

#### Location of Existing Wells within a One-Mile radius (See "Topo" Map "C" 3. attached):

The following wells are wells located within a one (1) mile radius of the proposed location.

None: Water Wells: a. b. None: Injection Wells:

C. None: **Producing Wells:** 

d. None: **Drilling Wells:** None: Shut-in Wells: e.

Temporarily Abandoned Wells: f. None:

g. None: **Disposal Wells:** None: **Abandoned Wells:** h.

ĺ. None: Dry Holes:

j. None: **Observation Wells:** 

Three: k. Pending (staked) Wells:

Big Pack 12-21-22-2 i. ii. Big Pack 12-21-13-2

iii. Big Pack 12-21-24-2

#### 4. Location of Existing and/or Proposed Facilities:

All production facilities will be located on the disturbed portion of the well pad and at a minimum of 25 feet from the toe of the back slope or the top of the fill slope.

A dike will be constructed completely around those production facilities which contain fluids (i.e. production tanks, produced water tanks and/or heater treater). These dikes will be constructed of compacted subsoil, be impervious, hold 100% of the capacity of the largest tank and be independent of the back cut.

All permanent (on site for six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth tone color to match one of the standard environmental colors, as determined by the rocky Mountain Five State Inter-Agency Committee

All facilities will be painted within 6 months of installation. The color shall be Carlsbad Canyon (2.5Y 6/2). Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded.

Any necessary pits will be properly fenced to protect livestock and prevent wildlife entry.

Gas Gathering Pipeline:

**ON-LEASE** 

6,070'

State of Utah (SITLA)

**OFF-LEASE** 

11,400'

BLM (r-o-w pending)

If the well is capable of economic production, a surface gas gathering line and related equipment shall be installed. The surface gas gathering line shall be in use year round. A total of approximately 11,470 feet of surface gas gathering pipeline shall be laid on the surface to minimize surface disturbance:

- a. ON-LEASE approximately 6,070 feet, and
- b. OFF-LEASE approximately 11,400 feet of 6 inch or less diameter steel, unpainted, welded gas gathering line is proposed.

The proposed pipeline will begin at the well site; continue along the lease road south and then northwesterly to the existing pipeline located near the center of Section 4, T12S-R21E. The proposed gathering line will be placed above ground adjacent to the proposed and existing access route. The line will be welded together and pulled from the well site location and tie-in point when practical; however, it may be necessary to utilize the access road for welding of the line. The line will then be boomed off to the side of the road. The gas meter run will be located within 500 feet of the wellhead. The meter run will be housed. The gas gathering line will be buried or anchored down from the wellhead to the meter.

Upon plugging and abandonment, the gas gathering line will be removed and the disturbed area will be re-contoured and restored as near as practical to the original condition. If necessary, re-seeding operations will be performed after completion of other reclamation operations.

#### 5. <u>Location and Type of Water Supply:</u>

Water will be obtained from the White River by Tu and Frum, Inc. Water User Claim #49-2185, Application #T75517, or by Target Trucking Water User Claim #43-2195, or by Dalbo Inc. Water User Claim #43-8496

Water will be hauled to the location over the roads marked on "Topo" Maps "A" and "B."

No water well is to be drilled on this lease.

#### **Source of Construction Materials:**

Surface and subsoil materials in the immediate area will be utilized fro location and access road construction.

Any gravel will be obtained from a commercial source; however, gravel sized rock debris associated with location and access road construction may be used as access road surfacing material.

#### 7. Methods of Handling Waste Materials:

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids, including salts and chemicals, will be contained in the reserve pit will be removed and disposed of at an approved waste disposal facility within 120 days after drilling is terminated.

The reserve pit well be constructed on the location and will not be located within natural drainage, where a flood hazard exits or surface runoff will destroy or damage the pit walls. The reserve pit will be constructed so that it will not leak, brake or allow discharge of liquids.

The reserve pit will be lined with ¼ felt and a minimum of 16 mm plastic with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the will be disposed of in the pit.

A chemical portable toilet will be furnished with the drilling rig. The toilet will be replaced periodically utilizing a licensed contractor to transport by truck the portable chemical toilet so that its contents can be delivered to the Vernal Wastewater Treatment Facility in accordance with state and county regulations.

Garbage, trash and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. No trash well be burned on location.

All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig.

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported or disposed of in association with the drilling, completion or testing of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported or disposed of in association with the drilling, completion or testing of this well.

Produced oil will be stored in an oil tank and then hauled by truck to a crude purchaser facility. Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to an approved disposal site.

#### 8. Ancillary Facilities:

During drilling operations, approximately 20 days, the site will be a manned camp. Three or four additional trailers will be on location to serve as the crews' housing and eating facilities. These will be located on the perimeter of the pad site within the topsoil stockpiles. Refer to Sheet 4.

#### 9. Well Site Layout: (Refer to Sheets #2, #3, and #4)

The attached Location Layout Diagrams described drill pad cross-sections, cuts and fills and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s) and surface material stockpiles(s).

Please see the attached diagram for rig orientation and access roads.

The top soil will be windrowed rather than piled. It will be reseeded and track walker at the time the location is constructed. Seeding will be with the determined during the onsite. (Refer to "Seed Mixture for Windrowed Top Soil Will included:" following herein.

The top soil removed from the pit area will be store separately and will not be reseeded until the pit is reclaimed.

All pits shall be fence to the following minimum standards:

- a. 39 inch net wire shall be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- b. The net wire shall be no more than 2 inches above the ground. The barbed wire shall be 3 inches over the new wire. Total height of the fence shall be at least 42 inches.
- c. Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- Standard steel, wood or pipe posts shall be used between the corner braces.
   Maximum distance between any two fence posts shall be no greater than 16 feet.

- e. All wire shall be stretched by, using a stretching device, before it is attached to corner posts.
- f. The reserve pit fencing will be on three sides during drilling operations and on the fourth side when the rig moves off location. Pits will be fenced and maintained until cleanup.
- g. Location size may change prior to drilling the well due to the current rig availability. If the proposed location is not large enough to accommodate the drilling, the location will be re-surveyed and a Form 9 will be submitted.

#### 10. Plans for Surface Reclamation:

#### **Producing Location:**

- a. Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, equipment, materials, trash and debris not required for production.
- b. Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 40CFR 3162.7.
- c. Before any dirt work associated with location restoration takes place, the reserve pit shall be as dry as possible. All debris in it will be removed. Other waste and spoil materials will be disposed of immediately upon completion of operations.
- d. The reserve pit and that portion of the location not needed for production facilities/operations will be re-contoured to the approximated natural contours. The reserve pit will be reclaimed within 90 days from the date of well completion, weather permitting.
- e. To prevent surface water(s) from standing (ponding) on the reclaimed reserve pit area, final reclamation of the reserve pit will consist of "mounding" the surface 3 feet above surrounding round surface to allow the reclaimed pit area to drain effectively.
- f. Upon completion of back filling, leveling and re-contouring, the stockpiled topsoil will be spread evenly over the reclaimed area(s).

#### **Dry Hole/Abandoned Location:**

- i. Abandoned well sites, roads and other disturbed areas will be restored as nearly as practical to their original condition. Where applicable, these conditions include the re-establishment of irrigation systems, the re-establishment of appropriate soil conditions and re-establishment of vegetation as specified.
- ii. All disturbed surfaces will be re-contoured to the approximated natural contours with reclamation of the well pad and access road to be performed as soon as practical after final abandonment. If necessary, re-seeding operations will be performed after completion of other reclamation operations.

#### Seed Mixture for Windrowed Top Soil Will Included:

To be provided by DOG&M and/or SITLA.

#### 11. Surface Ownership: Location, Access and Pipeline Route:

Wellsite: STILA (State of Utah)

Access: Bureau of Land management and State of Utah (SITLA)

Pipeline: Bureau of Land management, and

State of Utah (SITLA)

#### 12. Other Information

#### On-site Inspection for Location, Access and Pipeline Route:

Pending.

#### **Special Conditions of Approval:**

None.

#### **Archeology:**

a. A Cultural Resource Inventory Report is pending and to be prepared by Montgomery Archaeological Consultants.

#### Paleontology:

a. A Paleontology Reconnaissance Report is pending and to be prepared by Intermountain Paleo-Consulting.

If, during operations, any archaeological or historical sites, or any objects of antiquity (subject to the Antiquities Act of June 8, 1906) are discovered, all operations which would affect such sites will be suspended and the discovery reported promptly to the surface management agency.

#### 13, <u>Lessee's or Operator's Representatives:</u>

#### Representatives:

Alvin R. (Al) Arlian Landman – Regulatory Specialist Enduring Resources, LLC

475 17<sup>th</sup> Street, Suite 1500 Denver, Colorado 80202

Office Tel: 303-350-5114

Fax Tel: 303-573-0461

aarlian@enduringresources.com

Frank Hutto

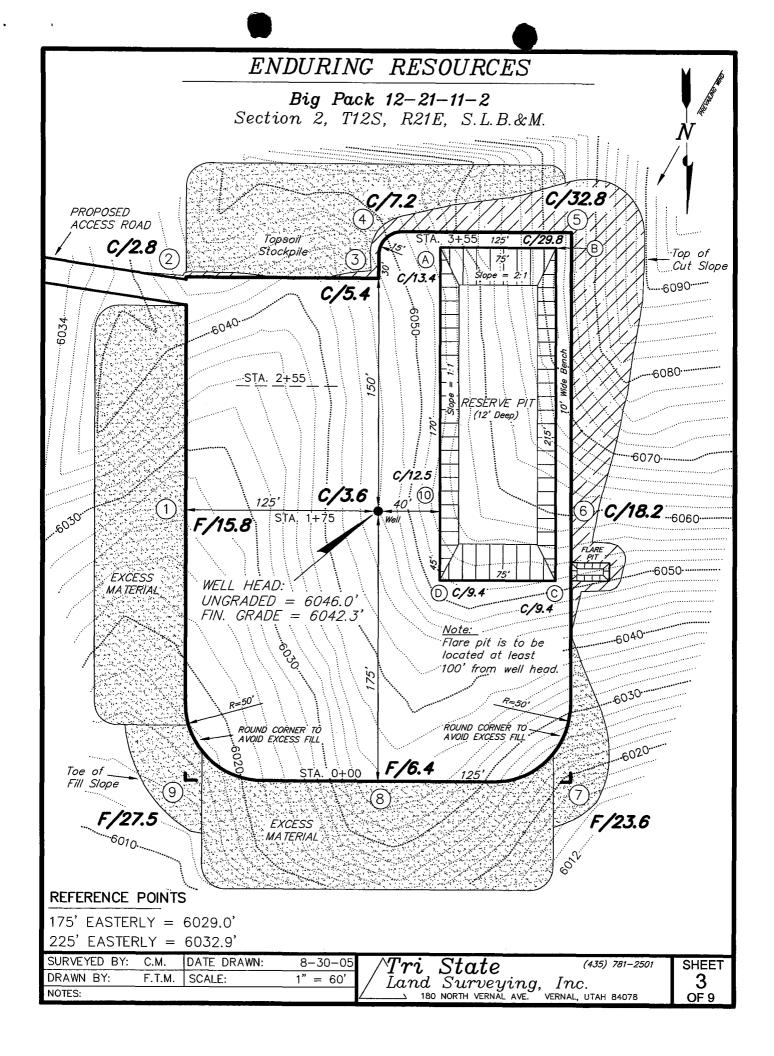
Vice President – Operations Enduring Resources, LLC 475 17<sup>th</sup> Street, Suite 1500 Denver, Colorado 80202

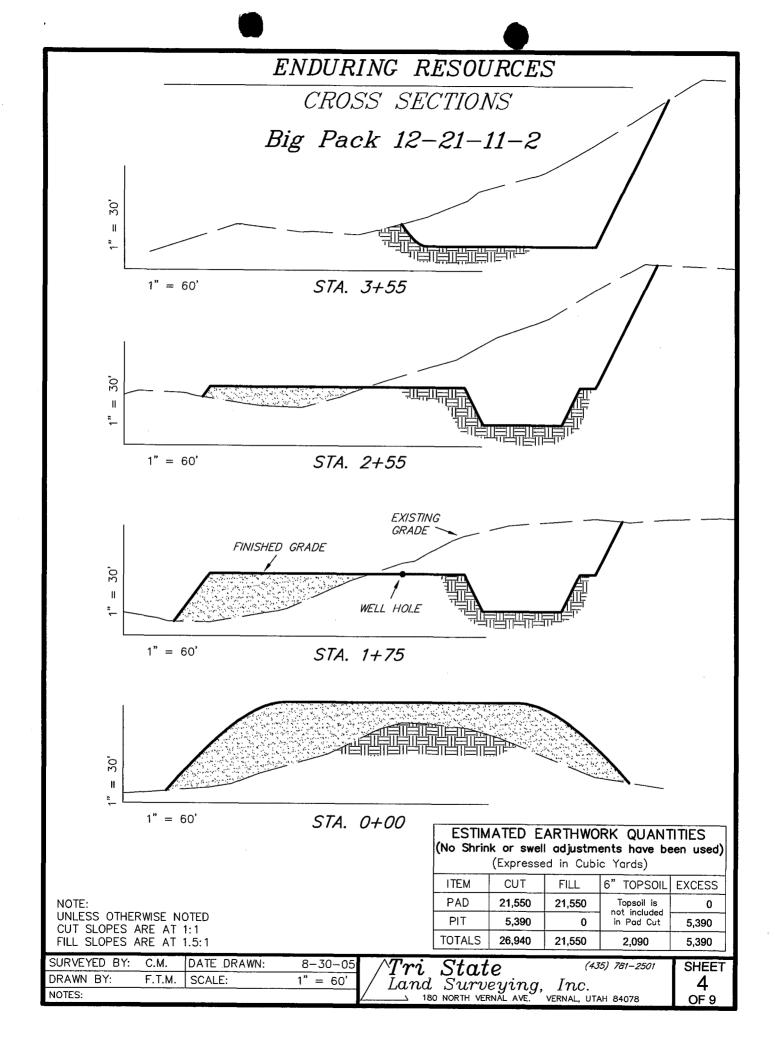
Office Tel: 303-573-5102 Fax Tel: 303-573-0461

fhutto@enduringresources.com

#### Directions to the Big Pack 12-21-11-2 Well Pad

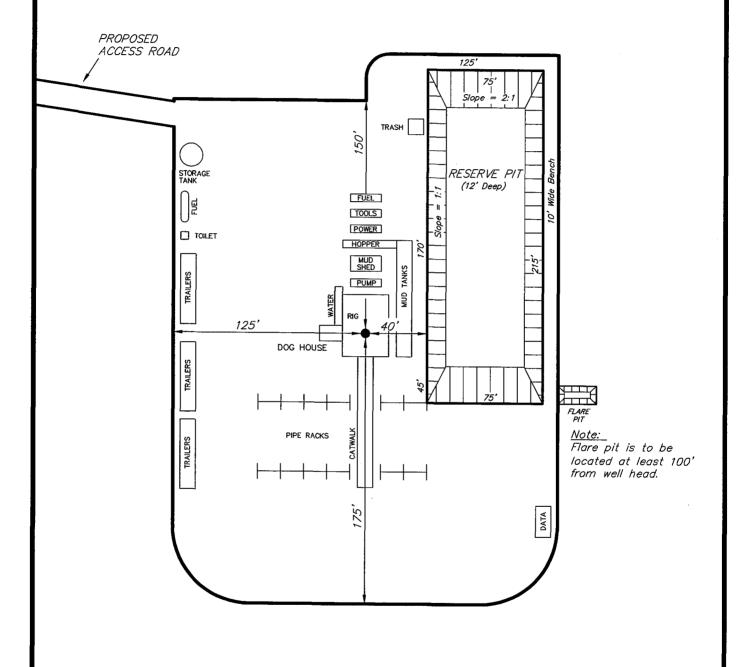
Beginning at the city of Bonanza, Utah. Leave the city of Bonanza heading south on Turkey Trak road for a distance of approximately 9.1 miles to a point where the road forks. Turn left onto Seep Ridge Road and continue heading southwest for a distance of approximately 2.3 miles where there is a turn-off to the left. Do not turn left. Continue heading southerly on Seep Ridge Road for a distance of approximately 12.2 miles (4.2 plus 3.3 plus 4.7, see topographic map A) to a turn-off to the left. Turn left and bear easterly along existing access for approximately 2.9 miles. Turn left and proceed nortwest for approximately 2,160' (0.5 miles) along proposed access to the Big Pack 12-21-11-2 well pad.



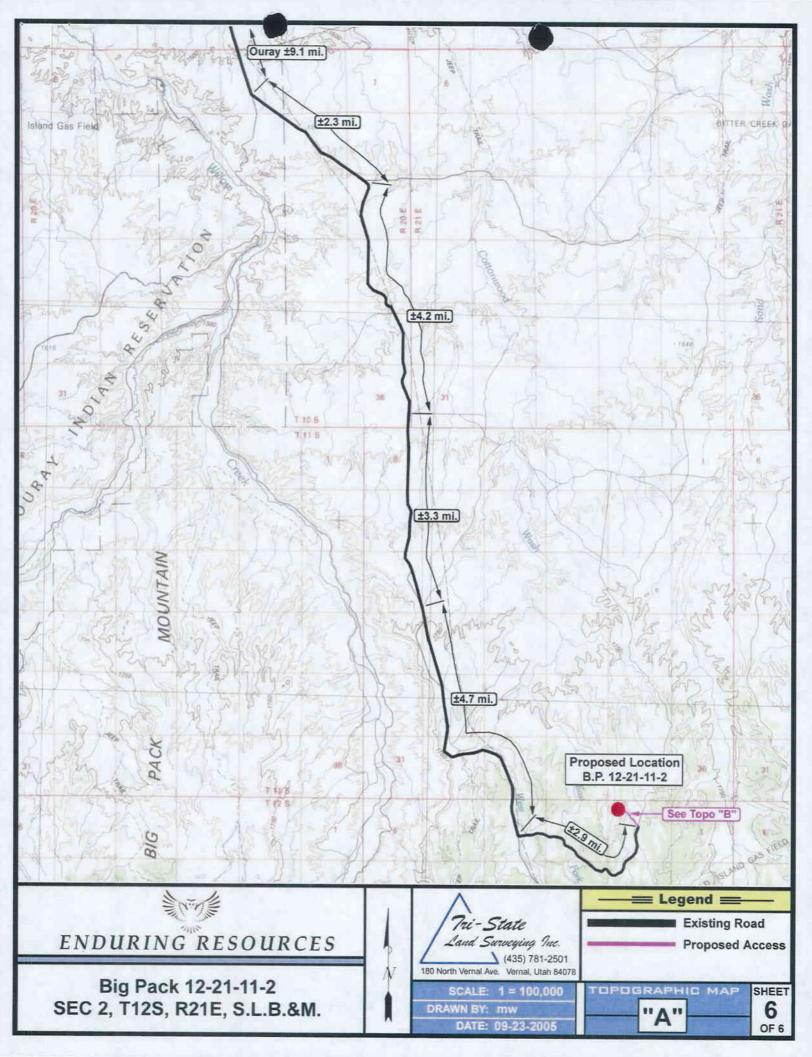


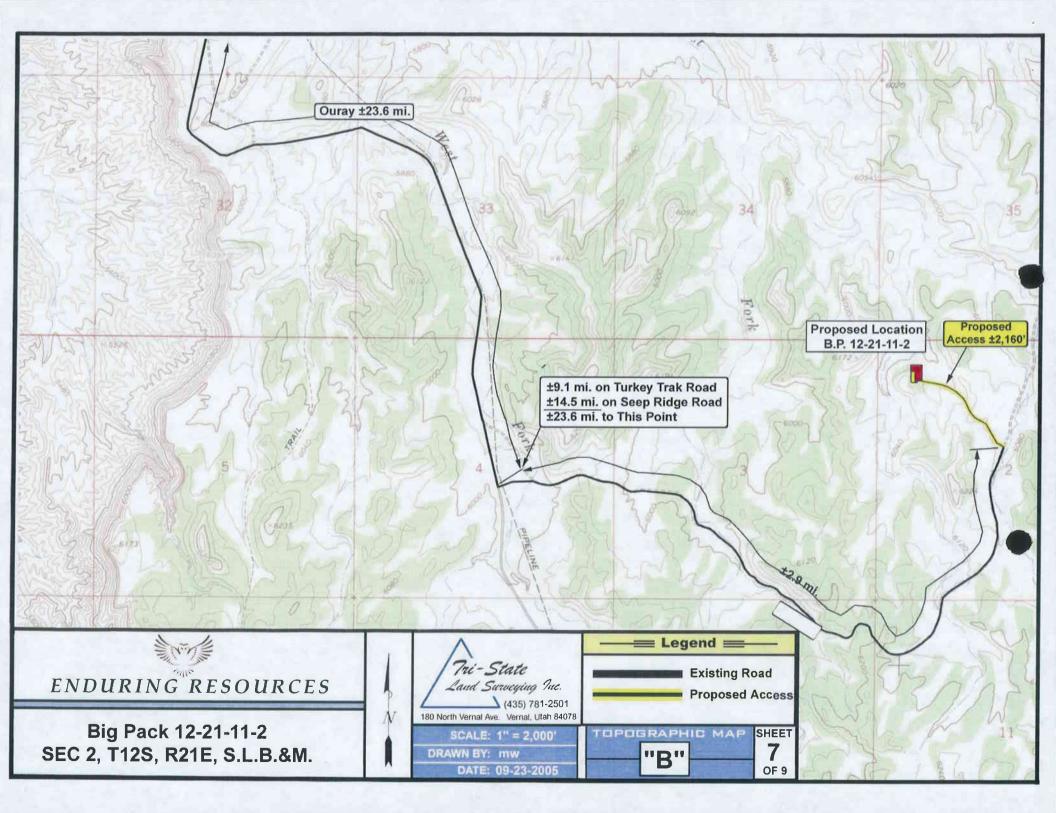
# ENDURING RESOURCES

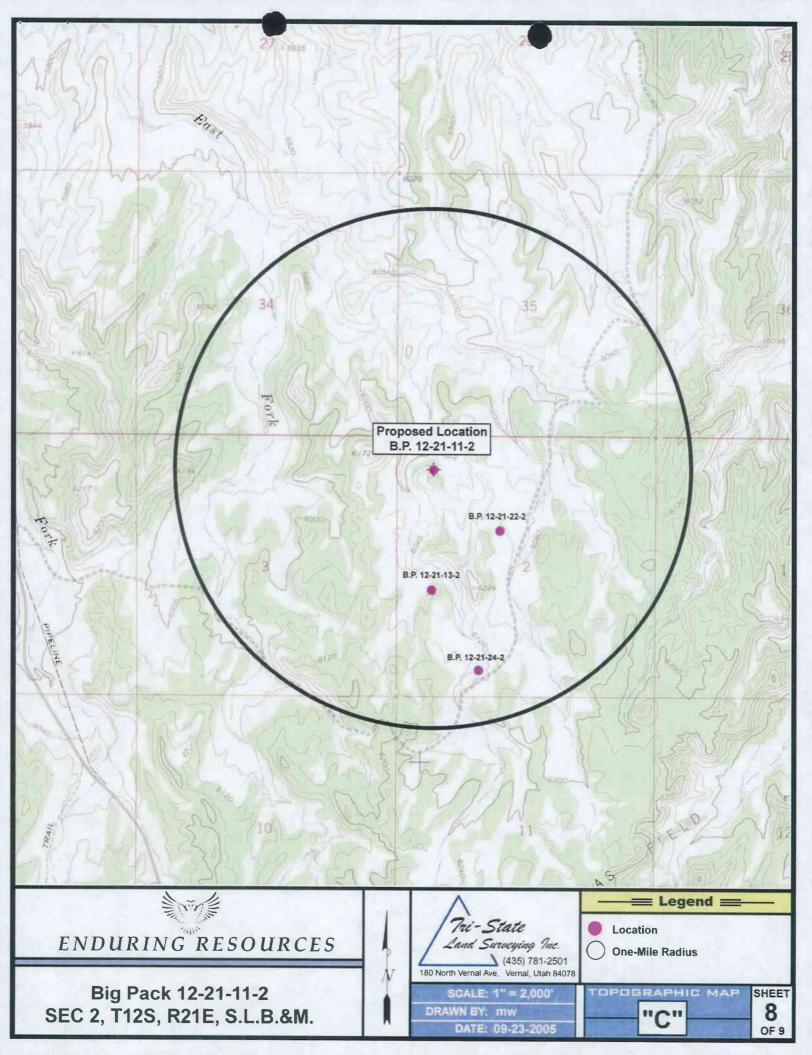
# TYPICAL RIG LAYOUT Big Pack 12-21-11-2

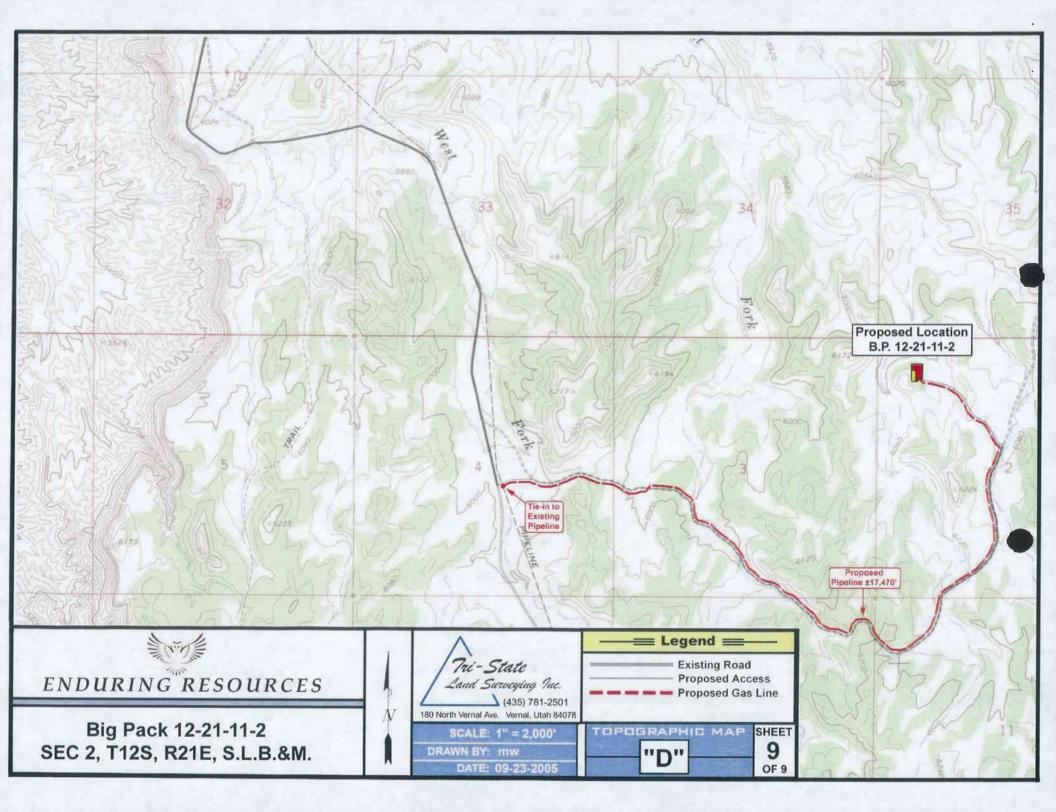


DRAWN BY: F.T.M. SCALE: 1" = 60'  NOTES:  Land Surveying, Inc.  180 NORTH VERNAL AVE. VERNAL, UTAH 84078  OF 9	SURVEYED BY:	C.M.	DATE DRAWN:	8-30-05	Mri	State	(435) 781-2501	SHEET
NOTES:	DRAWN BY:	F.T.M.	SCALE:	1" = 60'	Land	~	Im c	5
	NOTES:				/			OF 9











ENDURING RESOURCES
B.P. 12-21-11-2

CENTER STAKE

Date Photographed: 09/01/2005

Date Drawn: 09/30/2005

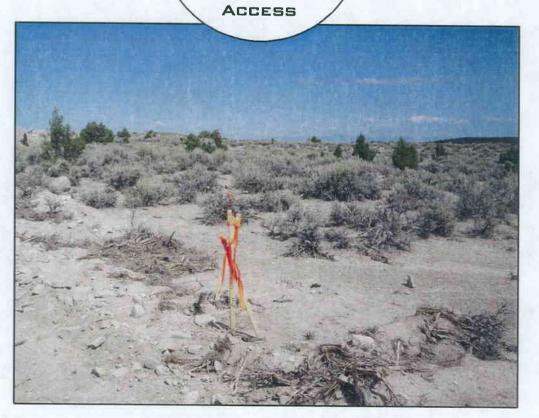
Drawn By: bgm

LOOKING NW

Pri-State
Land Surveying Inc.

(435) 781-2501

180 North Vernal Ave. Vernal, Utah 84078





NORTH

皇帝が ENDURING RESOURCES

B.P. 12-21-11-2

Date Photographed: 09/01/2005

Date Drawn: 09/30/2005 Drawn By: bgm

Tri-State Land Surveying Nuc. (435) 781-2501 180 North Vernal Ave. Vernal, Utah 84078

EAST





SOUTH

100 ENDURING RESOURCES

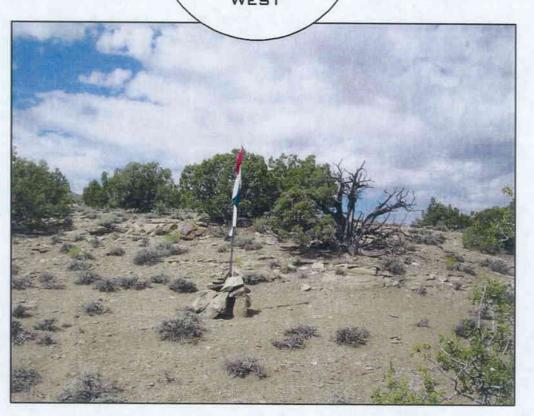
B.P. 12-21-11-2

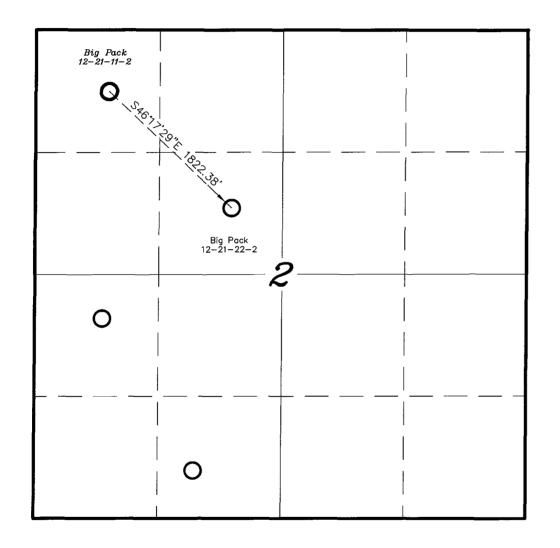
Date Photographed: 09/01/2005

Date Drawn: 09/30/2005 Drawn By: bgm

WEST

Tri-State Land Surveying Inc.
(435) 781-2501
180 North Vernal Ave. Vernal, Utah 84078





## ENDURING RESOURCES

SECTION DRILLING MAP
BIG PACK 12-21-11-2



**LEGEND** 

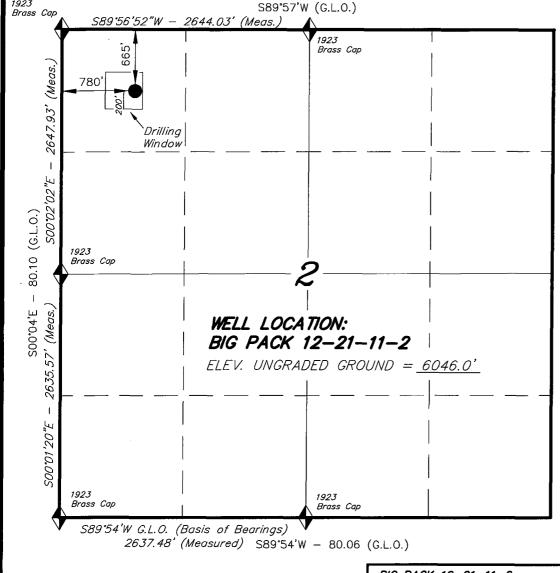
O = Vertical Well

Directional Well

#### TRI STATE LAND SURVEYING & CONSULTING

180 NORTH VERNAL AVE. - VERNAL, UTAH 84078 (435) 781-2501

	(433) 701-2301	
DATE DRAWN: 8-30-05	SURVEYED BY: C.M.	SHEET
REVISED:	DRAWN BY: F.T.M.	1
NOTES:	SCALE: 1" = 1000'	OF 9



= SECTION CORNERS LOCATED

BASIS OF ELEV; U.S.G.S. 7-1/2 min QUAD (BIG PACK MTN. SE)

BIG PACK 12-21-11-2 (Surface Location) NAD 83 LATITUDE = 39° 48' 29.14" LONGITUDE = 109° 32' 29.01"

(C.L.O.)

79.97

S00°01'W

#### ENDURING RESOURCES

WELL LOCATION, BIG PACK 12-21-11-2, LOCATED AS SHOWN IN THE NW 1/4 NW 1/4 OF SECTION 2, T12S, R21E, S.L.B.&M. UINTAH COUNTY, UTAH.



REGISTERS D LAND SUPPLEMENT OF BEAUTY

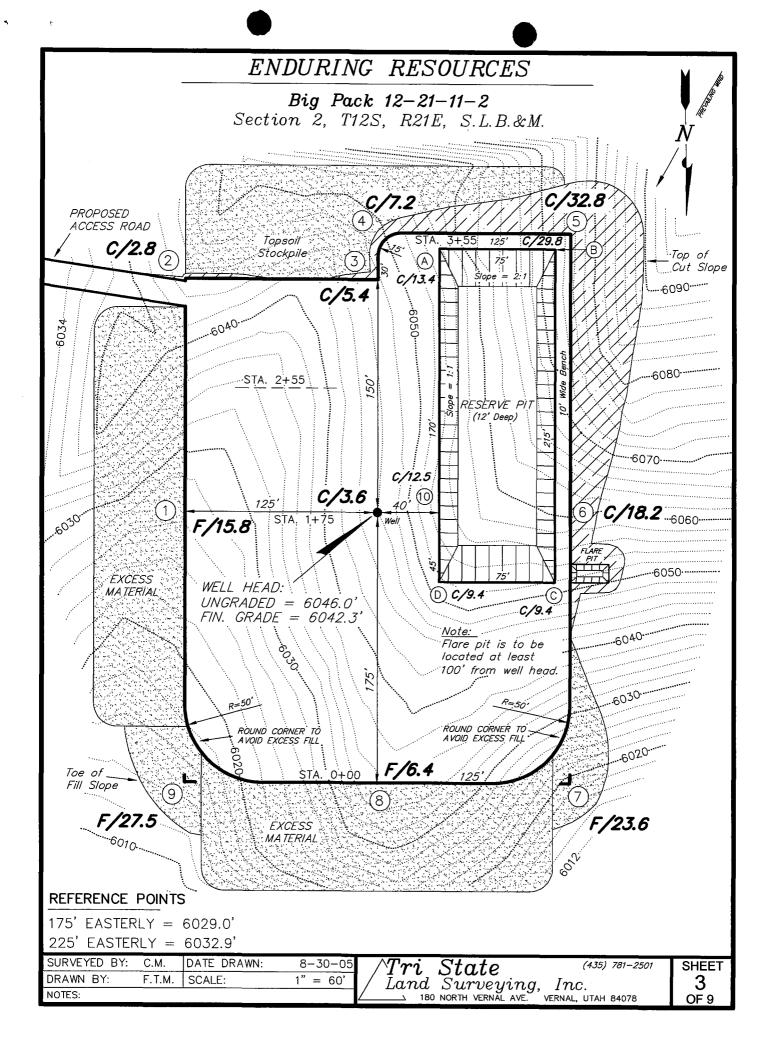
#### TRI STATE LAND SURVEYING & CONSULTING

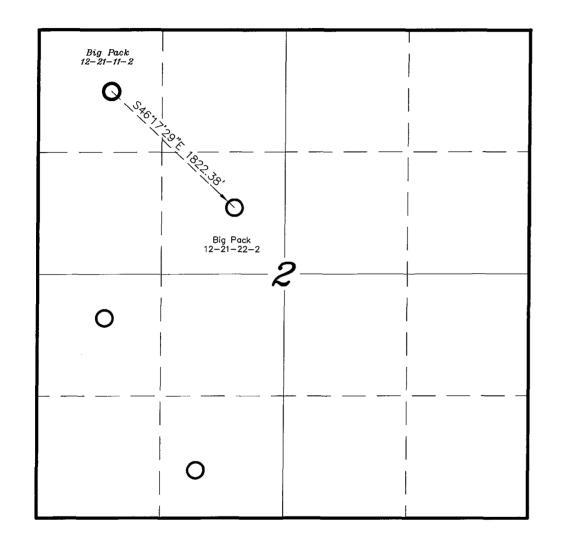
180 NORTH VERNAL AVE. - VERNAL, UTAH 84078 (435) 781-2501

**SHEET** 

OF 9

DATE DRAWN: 8-30-05	SURVEYED BY: C.M.
REVISED:	DRAWN BY: F.T.M.
NOTES:	SCALE: 1" = 1000'





## ENDURING RESOURCES

SECTION DRILLING MAP
BIG PACK 12-21-11-2



**LEGEND** 

O = Vertical Well

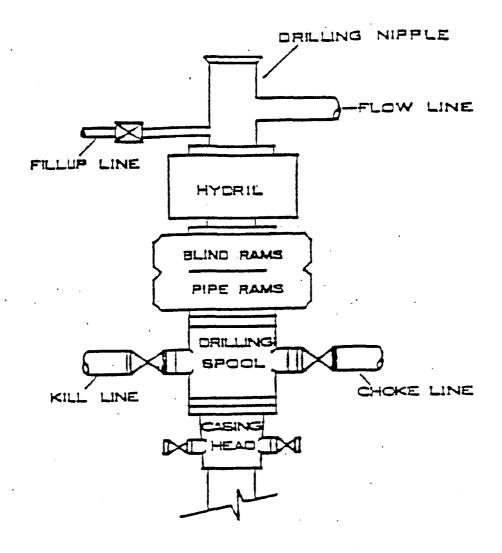
Directional Well

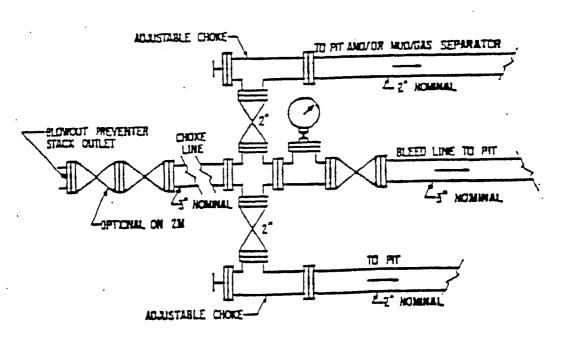
#### TRI STATE LAND SURVEYING & CONSULTING

180 NORTH VERNAL AVE. - VERNAL, UTAH 84078 (435) 781-2501

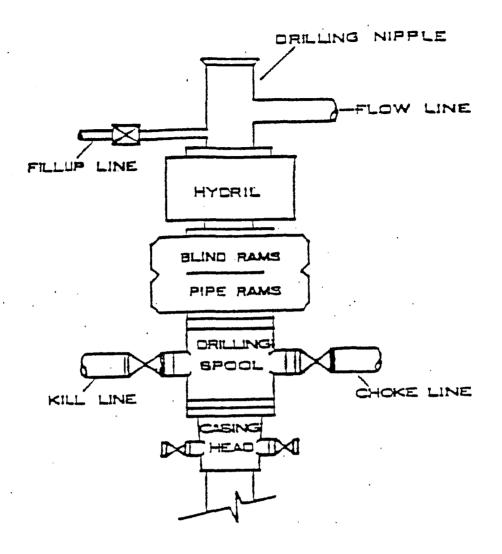
<u> </u>	( · · / · · - · - · - · · · · · · · ·	
DATE DRAWN: 8-30-05	SURVEYED BY: C.M.	SHEET
REVISED:	DRAWN BY: F.T.M.	1
NOTES:	SCALE: 1" = 1000'	OF 9

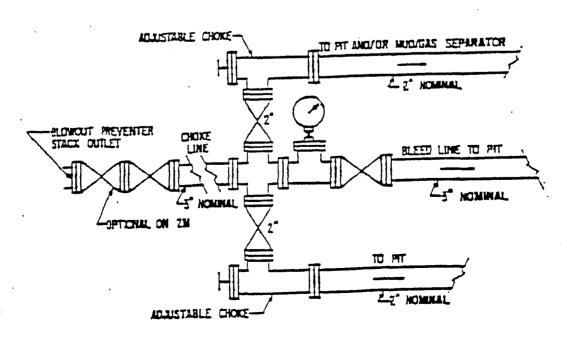
### EOP STACK



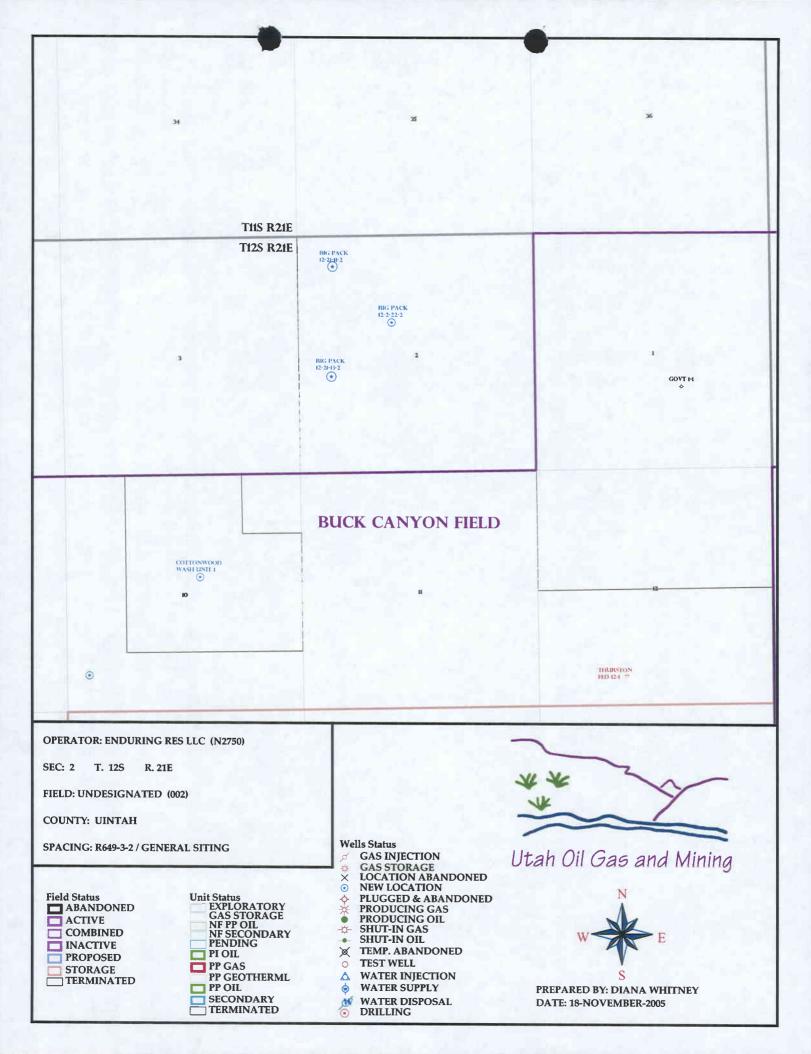


## EOP STACK





APD RECEIVED: 11/18/2005	API NO. ASSIGNED: 43-047-37403
WELL NAME: BIG PACK 12-21-11-2	
OPERATOR: ENDURING RESOURCES, LLC ( N2750 )	
CONTACT: AL ARLIAN	PHONE NUMBER: 303-350-5114
PROPOSED LOCATION:	
NWNW 02 120S 210E	INSPECT LOCATN BY: / /
SURFACE: 0665 FNL 0780 FWL BOTTOM: 0665 FNL 0780 FWL	Tech Review Initials Date
HATRIU	Engineering Deco 2(3)06
UNDESIGNATED ( 2 )	Geology
LEASE TYPE: 1 - Federal STATE  ML  LEASE NUMBER: 47084	Surface
SURFACE OWNER: 3 - State PROPOSED FORMATION: CSLGT COALBED METHANE WELL? NO	LATITUDE: 39.80805 LONGITUDE: -109.5407
RECEIVED AND/OR REVIEWED:  Plat Bond: Fed[] Ind[] Sta[] Fee[] (No. WBONOSO3) Potash (Y/N) Oil Shale 190-5 (B) or 190-3 or 190-13 Water Permit (No. 43-8496 RDCC Review (Y/N) (Date: ) Fee Surf Agreement (Y/N) Intent to Commingle (Y/N)	LOCATION AND SITING:  R649-2-3.  Unit  R649-3-2. General
STIPULATIONS: 4 Spaces of 3- STATEMENT OF	Basis
4-01 ( ( ) -	1



## DIVISION OF OIL, GAS AND MINING APPLICATION FOR PERMIT TO DRILL STATEMENT OF BASIS

OPERATOR:	ENDURING	RESOURCE	S, LLC.			
WELL NAME & NUMBER	: Big Pack 12-	21-11-2				
API NUMBER:						
<b>LOCATION</b> : 1/4,1/4 <u>NW/NY</u>	<u>W</u> sec: <u>2</u> TWP: <u>12S</u>	<b>RNG</b> : <u>21E</u> <u>7</u>	<u>08'</u> FWL <u>66</u>	5 FNL		
Geology/Ground Water:						
Enduring Resources proposes	to set 2,000 feet of	surface casing	cemented to	the surface.	. The base of the	
moderately saline water is esti	imated at 3,600 feet.	A search of	Division of	Water Right	s records shows no	
water wells within a 10,000 for	oot radius of the cent	er of Section	<ol><li>The surf</li></ol>	ace formatio	n at this location is	the
Uinta Formation. The Uinta						<u>not</u>
expected to produce prolific a	quiters. The Green	River Formati	on is near th	ne surface at	this location. The	
Green River Formation is made	le up of interbedded	limestones, sl	nales and sai	ndstones. Fr	esh water aquifers o	<u>:an</u>
be found in the Green River F	ormation and should	<u>l be protected.</u>	The propos	sed surface c	asing should	
adequately protect any potenti	any useable aquiters	<u>s.</u>				
Reviewer:	Brad Hill	Date:	12-05-05			
Surface:						
The predrill investigation of the	ne surface was perfo	rmed on 11/28	3/2005. Th	is site is on S	State surface, with S	State
minerals, and appears to be the	e best site for a locat	ion in the imn	<u>nediate area.</u>			
Ben Williams with UDWR as	nd Ed Bonner and	Jim Davis wi	th SITLA w	vere invited	to this investigation	ı on
11/22/2005. Only Mr. William	is was present. Mr. V	<u>Villiams stated</u>	the area is c	classified as h	<u>nigh value winter ha</u>	<u>bitat</u>
for deer and elk and critical	yearlong habitat fo	<u>r antelope. I</u>	<u>le explaine</u>	d how the a	reas are classified	and
recommended to Mr. Hammon	id, representing End	uring Resourc	es, that they	limit their a	ctivity from Nov. 1	<u>thru</u>
April 15 to protect wintering v	alues for deer. This	activity would	1 include roa	ad and pad co	onstruction, drilling	and
work-over rigs. Mr. Williams		mond, a UDV	/R recomme	ended seed n	nix to be used when	ı the
reserve pit and location are rec			:£:	:41.1		.1
This site will be somewhat difficult construction, drilling and operation.	ation of the well as a	wever no sign	incant stabii	ity problems	are anticipated with	1 tne
The state of the s	ation of the well as I	roposcu.				
Reviewer: Flo	oyd Bartlett	Date:	11/28/2005			

#### **Conditions of Approval/Application for Permit to Drill:**

1. A synthetic liner with a minimum thickness of 16 mils and a felt subliner shall be properly installed and maintained in the reserve pit.

OPERATOR: ENDURING RESOURCES, LLC.

WELL NAME & NUMBER: Big Pack 12-21-11-2

**API NUMBER:** 43-047-37403

LEASE: UTU-47084 FIELD/UNIT: Undesignated

LOCATION: 1/4,1/4 NW/NW sec: 2 TWP: 12S RNG: 21E 708' FWL 665 FNL

LEGAL WELL SITING: 460 F SEC. LINE; 460 F 1/4,1/4 LINE; 920 F ANOTHER WELL.

GPS COORD (UTM): 624923 X 4407262 Y SURFACE OWNER: STATE OF UTAH

#### **PARTICIPANTS**

Floyd Bartlett (DOGM), Doug Hammond, (Enduring Resources), Ben Williams (UDWR), Mike Stewart (Ponderosa Construction- Dirt Contractor).

#### REGIONAL/LOCAL SETTING & TOPOGRAPHY

The general area is the East Fork of Cottonwood Wash. Cottonwood Wash is an ephemeral drainage which runs northerly approximately 25 miles to the White River. The area is characterized by varied terrain consisting of shallow draws and small ridges.

The proposed Big Pack 12-21-11-2 well lies on the northeast slope of a ridge and extends into a swale. General terrain in the area is broken with frequent swales and small ridges. Exposed bedrock is common. Vegetation is sparse on the ridges. The drainage to the northeast of the location runs into a significant drainage of Cottonwood Wash.

The location is approximately 28 miles southeasterly of Ouray, Utah. Access is by State of Utah highways and Uintah County roads. The proposed site will be accessed by constructing approximately 0.5 miles of new road extending northwest from B.P. 12-21-22-2 location. This location is constructed but drilling has not yet begun.

#### SURFACE USE PLAN

CURRENT SURFACE USE: Wildlife. Possible light summer cattle grazing. Hunting.

PROPOSED SURFACE DISTURBANCE: <u>Construction of 2,160 feet of new access road; a well pad 355'x 250' plus reserve pit and soil stockpile</u> storage outside the described area.

LOCATION OF EXISTING WELLS WITHIN A 1-MILE RADIUS: See attached map (Topographic Map C) from GIS database.

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: All production facilities will be on location and added after drilling well. Pipeline will follow access road approximately 2,160 feet to tie-in point at the 12-21-22-2 well.

SOURCE OF CONSTRUCTION MATERIAL: <u>All construction material will be</u> borrowed from site during construction of location.

ANCILLARY FACILITIES: None will be required.

WILL DRILLING AT THIS LOCATION GENERATE PUBLIC INTEREST OR CONCERNS? EXPLAIN: Unlikely. Oilfield activity is common in the area is the dominant use.

#### WASTE MANAGEMENT PLAN:

Drilled cuttings will be settled into reserve pit. Liquids from pit will be allowed to evaporate. Formation water will be confined to storage tanks. Commercial contractor will handle sewage facilities, storage and disposal. Trash will be contained in trash baskets and hauled to an approved landfill.

#### ENVIRONMENTAL PARAMETERS

AFFECTED FLOODPLAINS AND/OR WETLANDS: None

FLORA/FAUNA: Poorly vegetated with juniper and black sagebrush; pronghorn antelope, rabbits, rodents, songbirds, raptors, elk, deer, bobcat, coyote.

SOIL TYPE AND CHARACTERISTICS: Gravely sandy loam. Sandstone bedrock surfaces on the location and on the adjacent ridges.

EROSION/SEDIMENTATION/STABILITY: A small drainage heads within the location and needs to be diverted to the west and south around the proposed pad. The reserve pit is within a cut area. No stability problems are anticipated with the construction and operation of the location.

PALEONTOLOGICAL POTENTIAL: Surveyed by ICP, on 10-09-2005. Report submitted to SITLA.

#### RESERVE PIT

CHARACTERISTICS: 215' by 75' and 12' deep. The reserve pit is planned within an area of cut. No stabilization problems are expected.

LINER REQUIREMENTS (Site Ranking Form attached): A liner will be required for reserve pit. Sensitivity score of 25, rating as Level I, Highly Sensitive. Operator said they would install a 16 mil. Liner with a ½" felt subliner.

# SURFACE RESTORATION/RECLAMATION PLAN

<u>AS</u>	PER	SITLA.		· · · · · · · · · · · · · · · · · · ·		 	 _		
SURFACE	AGRE	EMENT:_	PER	SITLA.				_	

CULTURAL RESOURCES/ARCHAEOLOGY: <u>Site was inspected by MOAC Archeological Consultants on 10/06/2005</u>. A report of this investigation will be placed on <u>file</u>.

# OTHER OBSERVATIONS/COMMENTS

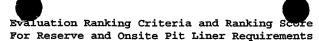
Ben Williams representing the UDWR stated the area is classified as high value winter habitat for deer and elk and critical yearlong habitat for antelope. He explained how the areas are classified and recommended to Mr. Hammond they limit their activity from Nov. 1 thru April 15 to protect wintering values for deer. This activity would include road and pad construction, drilling and work-over rigs. Jim Davis and Ed Bonner of SITLA were invited to the presite by email on 11/22/2005. Neither attended the review.

#### ATTACHMENTS

Photos of site have been taken and placed on file.

Floyd Bartlett
DOGM REPRESENTATIVE

11/28/2005 11:30 AM DATE/TIME



Tot Report and o		
Site-Specific Factors	Ranking	Site Ranking
Distance to Groundwater (feet)		
>200	0	
100 to 200 75 to 100	5	
25 to 75	10 15	
<25 or recharge area	20	
Distance to Surf. Water (feet)		
>1000	0	
300 to 1000	2	
200 to 300	10	
100 to 200	15	
< 100	20	0
Distance to Nearest Municipal Well (feet)		
>5280	0	
1320 to 5280	5	
500 to 1320	10	
<500	20	0
Distance to Other Wells (feet)		
>1320	0	
300 to 1320	10	
<300	20	0
Notice Gail Way		<del></del>
Native Soil Type Low permeability	•	
Mod. permeability	0 10	
High permeability	20	20
minda m		<del></del>
Fluid Type Air/mist	0	
Fresh Water	0 5	
TDS >5000 and <10000	10	
TDS >10000 or Oil Base Mud Fluid	15	
containing significant levels of		
hazardous constituents	20	5
Drill Cuttings		
Normal Rock	0	
Salt or detrimental	10	0
Annual Precipitation (inches)		
<10	0	
10 to 20 >20	5	
>20	10	
Affected Populations		
<10	0	
10 to 30	6	
30 to 50 >50	8 10	^
Presence of Nearby Utility	10	0
Conduits		
Not Present	0	
Unknown	10	
Present	15	0

25

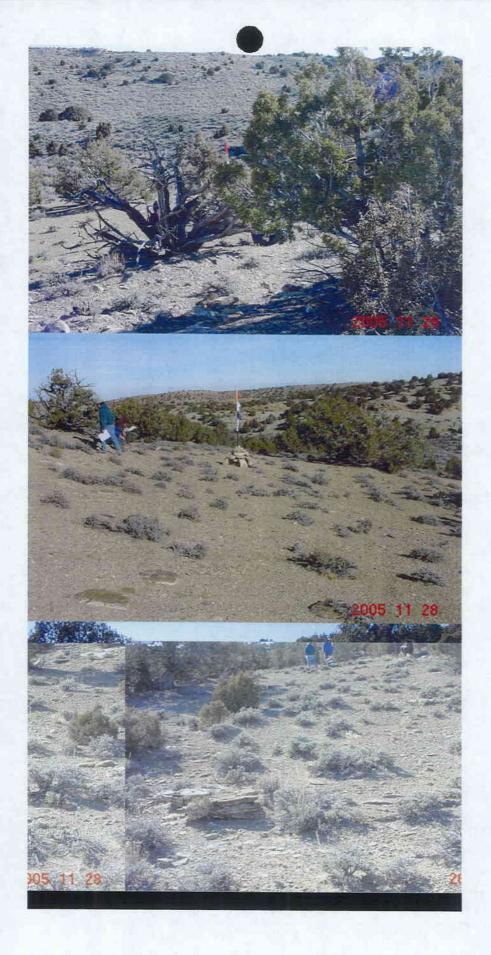
(Level I Sensitivity)

Sensitivity Level I = 20 or more; total containment is required.

Sensitivity Level II = 15-19; lining is discretionary.

Sensitivity Level III = below 15; no specific lining is required.

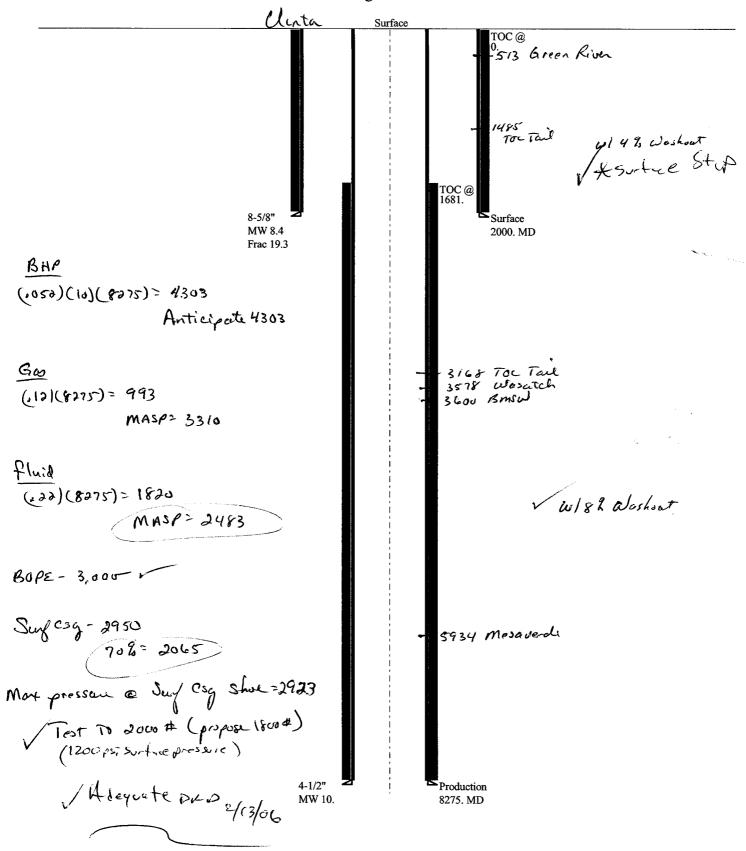
Final Score





# 2-06 Enduring Big Pack 12-2-11-2

**Casing Schematic** 



Well name:

02-06 Enduring Big Pack 12-21-11-2

Operator:

**Enduring Resources, LLC** 

String type:

**Design parameters:** 

Surface

Project ID: 43-047-37403

Location:

**Uintah County** 

Minimum design factors: **Environment:** 

Collapse

Mud weight: 8.400 ppg Design is based on evacuated pipe.

Collapse: Design factor

1.125

H2S considered? Surface temperature:

No 65 °F Bottom hole temperature: 93 °F

Temperature gradient:

1.40 °F/100ft

Minimum section length:

250 ft

**Burst:** 

Design factor

1.00

1.80 (J)

1.748 ft

True Vert

Depth

Cement top:

0 ft

**Burst** 

Run

Seq

Max anticipated surface

No backup mud specified.

Segment

Length

Size

pressure:

1,760 psi

Internal gradient: Calculated BHP

0.120 psi/ft 2,000 psi

**Nominal** 

Weight

**Tension:** 

8 Round STC: 8 Round LTC:

Neutral point:

Grade

1.80 (J) **Buttress:** 1.60 (J) Premium: 1.50 (J)

Body yield: 1.50 (B) Tension is based on buoyed weight.

End

**Finish** 

Re subsequent strings:

Non-directional string.

Next setting depth: 8.275 ft Next mud weight: Next setting BHP:

Fracture mud wt: Fracture depth:

10.000 ppg 4,299 psi 19.250 ppg 2.000 ft

Injection pressure 2,000 psi

Measured Drift Internal Depth Diameter Capacity /ft\ /in\ /ft³\

1	(ft) 2000	(in) 8.625	(lbs/ft) 24.00	J-55	ST&C	(ft) 2000	(ft) 2000	(in) 7.972	(ft³) 96.3
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	873	1370	1.570	2000	`2950	1.47	42	244	5.82 J

Prepared

Clinton Dworshak Utah Div. of Oil & Mining

Phone: 801-538-5280 FAX: 810-359-3940

Date: February 6,2006 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2000 ft, a mud weight of 8.4 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.



02-06 Enduring Big Pack 12-21-11-2

Operator:

**Enduring Resources, LLC** 

String type:

Production

Location:

**Uintah County** 

Project ID:

43-047-37403

Design parameters:

**Collapse** 

Mud weight:

10.000 ppg Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

**Environment:** 

H2S considered? Surface temperature: No 65 °F

Bottom hole temperature: 181 °F Temperature gradient: 1.40 °F/100ft Minimum section length: 1,500 ft

**Burst:** 

Design factor

1.00

1.80 (J)

1.80 (J)

1.60 (J)

1.50 (J)

Cement top:

1.681 ft

**Burst** 

Max anticipated surface

pressure:

3,306 psi 0.120 psi/ft

Internal gradient: Calculated BHP

4,299 psi

No backup mud specified.

**Tension:** 

8 Round STC: 8 Round LTC:

**Buttress:** Premium:

Body yield:

1.50 (B)

Tension is based on buoyed weight. Neutral point: 7.038 ft

Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	8275	4.5	11.60	N-80	LT&C	8275	8275	3.875	191.8
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	4299	6350	1.477	4299	7780	1.81	82	223	2.73 J

Prepared

Clinton Dworshak

Utah Div. of Oil & Mining

Phone: 801-538-5280 FAX: 810-359-3940

Date: February 6,2006 Salt Lake City, Utah

Collapse is based on a vertical depth of 8275 ft, a mud weight of 10 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

From: To: "Al Arlian" <aarlian@enduringresources.com>
"Diana Whitney" <dianawhitney@utah.gov>

Date:

11/18/2005 4:14:56 PM

Subject:

RE: lease numbers

Sorry Diana, it is a state section ML-47084

Thanks Al

----Original Message----

From: Diana Whitney [mailto:dianawhitney@utah.gov]

Sent: Friday, November 18, 2005 3:57 PM To: aarlian@enduringresources.com

Subject: lease numbers

Hi Al,

Big Pack 12-21-11-2 and 12-21-13-2 both have two different lease numbers. Is it UTU-47084 (APD cover) or ML-47084 (Drilling Plan)

Diana

From:

Ed Bonner

To:

Whitney, Diana

Date:

12/20/2005 9:54:05 AM

Subject:

Well Clearance

The following wells have been given cultural resource clearance by the Trust Lands Cultural Resources Group:

#### Enduring Resources, LLC

Big Pack 12-21-11-2

Big Pack 12-21-13-2

Big Pack 12-21-24-2

# EOG Resources, Inc

Chapita Wells Unit 695-32

### The Houston Exploration Company

North Walker Hollow 2-32-6-23

North Walker Hollow 8-32-6-23

North Walker Hollow 10-32-6-23

North Walker Hollow 12-32-6-23

North Walker Hollow 16-32-6-23

North Horseshoe 12-7-6-22

North Horseshoe 16-9-6-22

North Horseshoe 14-10-6-22

North Horseshoe 2-15-6-22

North Horseshoe 4-15-6-22

#### Westport Oil & Gas Company

NBU 1022-20N

NBU 1022-20L

NBU 1022-20F

NBU 1022-20D

If you have any questions regarding this matter please give me a call.

CC:

Garrison, LaVonne; Hill, Brad; Hunt, Gil



State of Utah

Department of Natural Resources

MICHAEL R. STYLER Executive Director

Division of Oil, Gas & Mining

JOHN R. BAZA
Division Director

JON M. HUNTSMAN, JR.

Governor

GARY R. HERBERT Lieutenant Governor

February 13, 2006

Enduring Resources, LLC 475 17th St., Ste. 1500 Denver, CO 80202

Re:

Big Pack 12-21-11-2 Well, 665' FNL, 780' FWL, NW NW, Sec. 2,

T. 12 South, R. 21 East, Uintah County, Utah

#### Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-37403.

Sincerely,

Gil Hunt

Associate Director

pab Enclosures

cc:

Uintah County Assessor

SITLA

Operator:	Enduring Resources, LLC						
Well Name & Number	Big Pack 12-21-11-2						
API Number:	43-047-37403						
Lease:	ML-470	084					
Location: NW NW	Sec. 2	T. 12 South	R. <u>21 East</u>				

### **Conditions of Approval**

#### 1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for Permit to Drill.

# 2. Notification Requirements

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- 24 hours prior to cementing or testing casing
- 24 hours prior to testing blowout prevention equipment
- 24 hours prior to spudding the well
- within 24 hours of any emergency changes made to the approved drilling program
- prior to commencing operations to plug and abandon the well

The following are Division of Oil, Gas and Mining contacts and their work telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at (801) 538-5338
- Carol Daniels at (801) 538-5284 (spud)

#### 3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

- 4. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.
- 5. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)

Page 2 43-047-37403 February 13, 2006

- 6. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.
- 7. Surface casing shall be cemented to the surface.

# STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

DIVISION OF OIL, GAS AND MINING	5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47084					
SUNDRY NOTICES AND REPORTS ON	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:					
SUNDRY NOTICES AND REPORTS ON	n/a 7. UNIT or CA AGREEMENT NAME:					
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current botton drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for su	m-hole depth, reenter plugged wells, or to					
1 TYPE OF WELL	8. WELL NAME and NUMBER:					
	Big Pack 12-21-11-2					
2. NAME OF OPERATOR: Enduring Resources, LLC	9. API NUMBER: 4304737403					
3. ADDRESS OF OPERATOR:	PHONE NUMBER: 10. FIELD AND POOL, OR WILDCAT:					
475 17th Street, Suite 1500 CITY Denver	2 (303) 350-5719 Undesignated					
4. LOCATION OF WELL FOOTAGES AT SURFACE: 665' FNL - 780' FWL	COUNTY: <b>Uintah</b>					
FOOTAGES AT SURFACE: DOS FINL - / OU FVVL	South Cities in the control of the c					
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNW 2 12S 21E	UTAH					
11. CHECK APPROPRIATE BOXES TO INDICATE NA	TURE OF NOTICE, REPORT, OR OTHER DATA					
TYPE OF SUBMISSION	TYPE OF ACTION					
✓ NOTICE OF INTENT	DEEPEN REPERFORATE CURRENT FORMATION					
(Submit in Duplicate) ALTER CASING	FRACTURE TREAT SIDETRACK TO REPAIR WELL					
	NEW CONSTRUCTION TEMPORARILY ABANDON					
	DPERATOR CHANGE TUBING REPAIR					
	PLUG AND ABANDON VENT OR FLARE					
(Submit Original Form Only)	PLUG BACK WATER DISPOSAL  PRODUCTION (START/RESUME) WATER SHUT-OFF					
Date of work completion:	PRODUCTION (START/RESUME)  WATER SHUT-OFF  WELL SITE  OTHER: Request for APD					
	RECOMPLETE - DIFFERENT FORMATION  Extension					
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent	details including dates, depuis, volumes, etc.					
Enduring Resources, LLC respectfully request an extension	to the expiration date of this Application for Permit to Drill					
FROM: 2-13-2007						
FROM: 2-13-2007 TO: 2-13-2008	. L. Aleo					
	Approved by the					
	Utah Division of					
Oil, Gas and Mining						
	- 1 1-9-07					
•	Date: 01-06-014					
·	Date: DI COLHIII					
Ę	By: Diallett					
NAME (PLEASE PRINT) Evette Bissett	Regulatory Compliance Assistant					
SIGNATURE GULLET BUSSELY	DATE 1/3/2007					

(This space for State use only)

RECEIVED

JAN 0 5 2007

# **Application for Permit to Drill Request for Permit Extension** Validation (this form should accompany the Sundry Notice requesting permit extension)

API: 4304737403 Well Name: Big Pack 12-21-11-2
Location: 665' FNL - 780' FWL, NWNW, Sec 2, T12S-R21E
Company Permit Issued to: Enduring Resources, LLC
Date Original Permit Issued: 2/13/2006
The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.
Following is a checklist of some items related to the application, which should be verified.
If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes□No□
Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes☐ No ☑
Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes□No☑
Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes□No ☑
Has the approved source of water for drilling changed? Yes□No☑
Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes □ No ☑
Is bonding still in place, which covers this proposed well? Yes ☑No□
Gutter Bisself 1/3/2007
Signature Date
Title: Regulatory Compliance Assistant
Representing: Enduring Resources, LLC
RECEIVED
JAN 0 5 2007

COMPORTAL

STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

	DIVISION OF OIL, GAS AND MI	INING		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47084		
SUNDRY	NOTICES AND REPORT	S ON WEL	LS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a		
Do not use this form for proposals to drill n drill horizontal la	7. UNIT OF CA AGREEMENT NAME: n/a					
1. TYPE OF WELL OIL WELL		8. WELL NAME and NUMBER: Big Pack 12-21-11-2				
2. NAME OF OPERATOR:	<del></del>			9. API NUMBER:		
Enduring Resources, LLC  3. ADDRESS OF OPERATOR:	4304737403 10. FIELD AND POOL, OR WILDCAT:					
475 17th Street, Suite 1500	y Denver STATE CO ZIF	,80202	(303) 350-5719	Undesignated		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 665' F	NL - 780' FWL			соинту: Uintah		
QTR/QTR, SECTION, TOWNSHIP, RAN	NGE, MERIDIAN: NWNW 2 12S 2	21E S		STATE: UTAH		
11. CHECK APPI	ROPRIATE BOXES TO INDICAT	TE NATURE	OF NOTICE, REPO	RT, OR OTHER DATA		
TYPE OF SUBMISSION		T	YPE OF ACTION			
NOTICE OF INTENT	ACIDIZE	DEEPEN		REPERFORATE CURRENT FORMATION		
(Submit in Duplicate)	ALTER CASING	FRACTURE	TREAT	SIDETRACK TO REPAIR WELL		
Approximate date work will start:	CASING REPAIR	NEW CONS	STRUCTION	TEMPORARILY ABANDON		
	CHANGE TO PREVIOUS PLANS	OPERATOR		TUBING REPAIR		
	CHANGE TUBING	PLUG AND		VENT OR FLARE		
SUBSEQUENT REPORT (Submit Original Form Only)	CHANGE WELL NAME	WATER DISPOSAL				
Date of work completion:	CHANGE WELL STATUS	WATER SHUT-OFF				
	COMMINGLE PRODUCING FORMATIONS	RECLAMAT	TION OF WELL SITE	✓ OTHER: Request for APD  Extension		
	CONVERT WELL TYPE	RECOMPLE	ETE - DIFFERENT FORMATION	Extension		
12. DESCRIBE PROPOSED OR CO	OMPLETED OPERATIONS. Clearly show all	pertinent details in	cluding dates, depths, volum	es, etc.		
	e <sup>rs</sup> )					
Enduring Resources,	LLC respectfully request an exte	nsion to the	expiration date of this	Application for Permit to Drill		
FROM: 1-8-2						
TO: 1-8-20	the					
	101.					
Utah Division of Oil, Gas and Mining						
	Ou, v	Cities division				
		· ~~	D800			
COPY SENT TO OPERATO	Date:	21-04	<del>-99\(\frac{1}{4}\)</del>			
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minds: _K5	- By:`	Day	Al-			
·			M = =			
NAME (PLEASE PRINT) Alvin R. (A			_ Landman - Regu	latory Specialist		
NAME (PLEASE PRINT)	<u> </u>	TITI				
SIGNATURE	<i>'\\</i>	DA1	1/2/2008	<u> </u>		

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RECEIVED

JAN 07 2008



# Application for Permit to Drill Request for Permit Extension Validation

(this form should accompany the Sundry Notice requesting permit extension)

API: 4304737403  Well Name: Big Pack 12-21-11-2  Location: 665' FNL - 780' FWL, NWNW, Sec 2, T12S-R21E  Company Permit Issued to: Enduring Resources, LLC  Date Original Permit Issued: 2/13/2006
The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.
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Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes ☐ No ☑
Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes□No☑
Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes□No ☑.
Has the approved source of water for drilling changed? Yes□No☑
Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes□No☑
Is bonding still in place, which covers this proposed well? Yes ☑No ☐
Signature Date
Title: Landman - Regulatory Specialist
Representing: Enduring Resources, LLC RECEIVED

JAN 07 2008



GARY R. HERBERT
Lieutenant Governor

# State of Utah

# DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA

February 2, 2009

Al Arlian Enduring Resources LLC 475 17<sup>TH</sup> Street, Ste. 1500 Denver, CO 80202

Re:

APD Rescinded - Big Pack 12-21-11-2, Sec. 2, T. 12S, R. 21E

Uintah County, Utah API No. 43-047-37403

Dear Mr. Arlian:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on February 13, 2006. On January 8, 2007 and January 7, 2008, the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective February 2, 2009.

A new APD must be filed with this office for approval <u>prior</u> to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely.

nama mason

**Environmental Scientist** 

cc: Well File

SITLA, Ed Bonner

